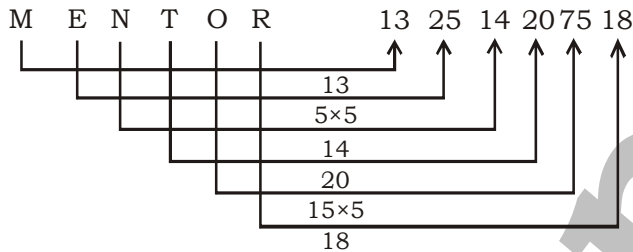
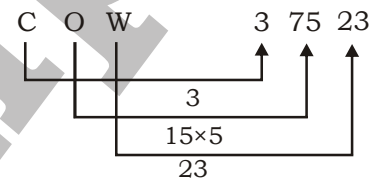


SSC MOCK TEST - 328 (SOLUTION)

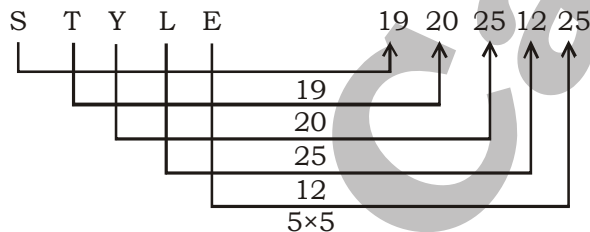
1. (A) $As, 2870 \Rightarrow 70 - 28 = 42 \Rightarrow 4 \times 2 = 8$
Similarly, $3678 \Rightarrow 78 - 36 = 42 \Rightarrow 4 \times 2 = 8$
2. (C) Crocodile and Snake are belongs to reptiles, while Iguana and Chameleon are belongs to reptiles.
3. (D) (A) $94 \Rightarrow 9 + 4 = 13$
(B) $76 \Rightarrow 7 + 6 = 13$
(C) $85 \Rightarrow 8 + 5 = 13$
(D) $77 \Rightarrow 7 + 7 = 14 \neq 13$
4. (C) Except Cashew, others are fruits.
5. (B) As,



And,



Similarly,



6. (A) $97 + 16 = 113$
 $113 + 32 = 145$
 $145 + 64 = 209$
 $209 + 128 = 337$
 $337 + 256 = 593$

7. (B) D I N S X C

+5 +5 +5 +5 +5

8. (C)

Thus, the man is now facing towards West.

9. (D) As, $17 \times 94 = 1598 \Rightarrow 1 + 5 + 9 + 8 = 23$
Similarly, $18 \times 85 = 1530 \Rightarrow 1 + 5 + 3 + 0 = 9$

10. (C) lmjqr/lmjqr/lmjqr

11. (A)

12. (D) **In the first row,**

$$9^2 - 17 = 64$$

In the second row,

$$8^2 - 12 = 52$$

In the third row,

$$6^2 - 16 = 20$$

13. (B) $72 \div 18 \times 14 + 12 - 8 = 94$

After changing 18 and 12,

$$72 \div 12 \times 14 + 18 - 8 = 94$$

$$6 \times 14 + 18 - 8 = 94$$

$$102 - 8 = 94$$

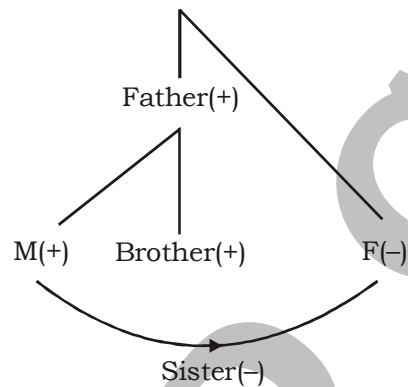
$$94 = 94$$

14. (C) $C > A > B$

$$C > E > D = A$$

Clearly, C is the tallest.

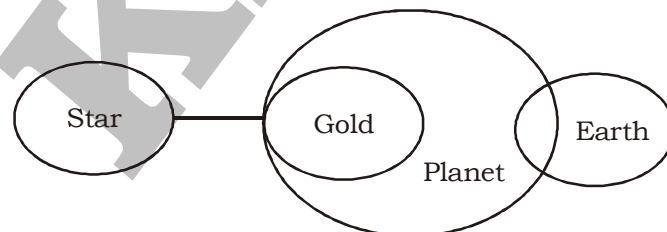
15. (A) Grand father(+)



Hence, F is the sister of M.

16. (A) 5. Daemon → 3. Dearth → 2. Demand → 1. Dementia → 5. Daemon

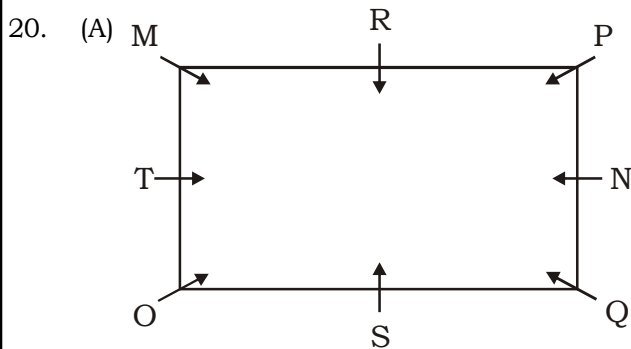
17. (B)



I. False II. False III. False

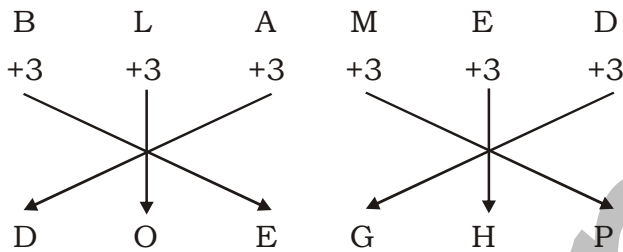
Hence, no conclusion follows.

18. (D) 19. (A)

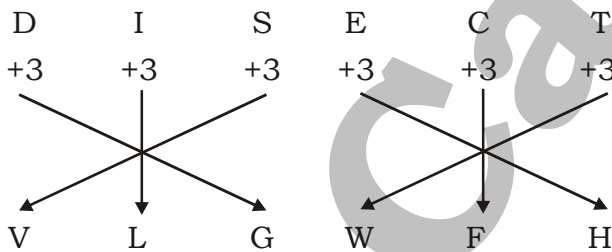


So, N is immediate left to P.

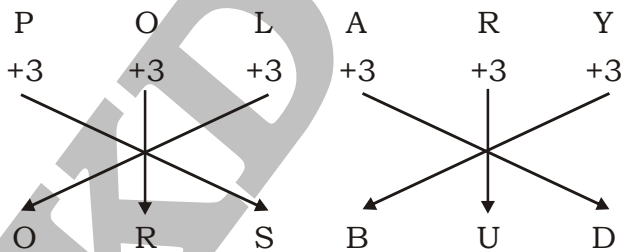
21. (D) As,



And,



Similarly,



22. (D) 23. (B) 24. (C) 25. (D)

26. (B) Sunway Taihulight has been named as the world's fastest supercomputer title, as per recently released semiannual Top 500 list of supercomputers. It is developed by the China's National Research Centre of Parallel Computer Engineering and Technology (NRCPC).

27. (C) The Consultative Committee of Members of Parliament for railway zones. Ministry of Parliamentary Affairs constitutes Consultative Committees of Members of both the Houses of Parliament. 2. The main purpose of these Committees are to provide a forum for formal discussions between the Government and Members of Parliament on policies and programmes of the Government.

28. (B) In telecommunications and signal processing frequency modulation FM conveys information over a carrier wave by varying its instantaneous frequency. FM is most commonly used for radio and television broadcasting.
29. (B) Sundarban is the coastal area in eastern part of India near West Bengal having saline/brackish water where shrub or small trees grow. This group of trees and shrubs is known as mangrove forest.
31. (C) 42nd Amendment Act, 1976 is one of the most important amendments to the Indian Constitution. It was enacted by the Indian National Congress headed by Indira Gandhi then. Due to the large number of amendments this act has brought to the Indian Constitution, it is also known as 'Mini-Constitution'.
32. (C) Ruskin Bond is an Indian author of British descent. He has been writing novels, poems, essays and short stories for over forty years now.
33. (C) ODI shirt no. pronunciation (help:info); 11 August 1954 - 13 July 2021) was an Indian international cricketer. He was an explosive middle order batsman who played during the 1970s and 80s.
34. (C) National Highway 7 is the longest in the country.
35. (B) The correct answer is Worship of nature and Yajnas. The religion of "early Vedic Aryans" was primarily the "worship of nature and Yajnas".
38. (A) World Travel Market 2021 in London Attracts Global Participants as Tourism is Restarted.
39. (A) We can say Optical Fibre works on the principle of total internal Reflections. ... This technology used the concept of light which is known as Total Internal Reflection (TIR). This phenomena happens when light rays pass through more optically, dense medium to less optically dense medium.
41. (A) Blue green algae is used as a biofertilizer in rice crop. Blue green algae has the nitrogen fixing ability which enhances the production of rice.
43. (B) It was the start of the civil disobedience movement which commenced as Mahatma Gandhi broke the salt law on the coastal town of Dandi on the Arabian Sea on April 5. Dandi March is also known as Namak Satyagrah or Salt Satyagrah.
44. (A) When value is expressed in terms of money, it is called price. Thus, price can be defined as exchange value of a commodity expressed in terms of money.
45. (C) The colors in fireworks are created by the use of metal salts. Metal salts commonly used in firework displays include: strontium carbonate (red fireworks), calcium chloride (orange fireworks), sodium nitrate (yellow fireworks), barium chloride (green fireworks) and copper chloride (blue fireworks).
47. (C) RDX is also known, but less commonly, as cyclonite, hexogen (particularly in Russian, French, German and German-influenced languages), T4, and, chemically, as cyclotrimethylenetrinitramine.
49. (C) Producers under monopolistic competition often spend substantial amounts on advertising and publicity.
50. (C) Jammu and Kashmir Police has bagged 115 Police Medals for Gallantry (PMG), out of a total of 189 awarded this year.
51. (A) Let the length of train be x m and the length of platform be $2x$ m.

$$\text{Speed of train} = 162 \text{ km/hr} = 162 \times \frac{5}{18} = 45 \text{ m/s}$$

ATQ,

$$\frac{x + 2x}{45} = 20$$

$$3x = 900$$

$$x = 300 \text{ m}$$

$$\therefore \text{Length of platform} = 300 \times 2 = 600 \text{ m}$$

52. (B) Since $88 = 8 \times 11$
 The number must be divisible by 8 and 11 individually
 First, rule of divisibility by 8:
 Last three digits of the number must be divisible by 8.
 Therefore, the last three digits (10x) of the number will be 104. (no other digit will make it divisible by 8)
 Therefore, $x = 4$
 Now, rule of divisibility by 11:
 Difference between sum of digits at odd place and sum of digits at even place must be divisible by 11.
 Therefore,
 $(2 + 6 + 1 + 4) - (y + 8 + 0) = 11n$, where n is any integer
 $13 - (y + 8) = 11n$
 $-y + 5 = 11n$
 $-y + 5 = 0$ ($n = 0$, because $n = 1$ will make y negative and -1 will make y a double digit number)
 Therefore, $y = 5$
 Now, $x \times y = 4 \times 5 = 20$
53. (C) Profit at selling price of ₹ 7250 = Loss at selling price of ₹ 4850
 $7250 - CP = CP - 4850$
 $2CP = 7250 + 4850$
 $2CP = 12100$
 $CP = \frac{12100}{2} = ₹ 6050$
54. (D) Let the sale of 5th day be ₹ x.
 ATQ,

$$\frac{4250 + 4840 + 3655 + 2980 + x}{5} = 3200$$

$$\frac{15725 + x}{5} = 3200$$

$$15725 + x = 16000$$

$$x = 16000 - 15725 = ₹ 275$$
55. (C) If pipe A, B and C are opened together, they took 80 minutes to empty $\frac{5}{18}$ of the tank.
 We know that 80 minutes = $1\frac{1}{3}$ hrs = $\frac{4}{3}$ hrs
 So, tank emptied by pipe A and B in $\frac{4}{3}$ hrs = $-\frac{4}{3}\left[\frac{1}{6} + \frac{1}{16}\right] = -\frac{4}{3}\left[\frac{8+3}{48}\right] = -\frac{11}{36}$ of the tank
 Here, the negative sign only shows that tank is emptied by Pipe A and B.
 Tank emptied by Pipe A, B and C in $\frac{4}{3}$ hrs = $-\frac{5}{18} = -\frac{10}{36}$ of the tank.
 Tank emptied by Pipe C in 80 minutes = $-\frac{10}{36} - \left(-\frac{11}{36}\right) = \frac{1}{36}$ of the tank
 Tank emptied by Pipe C in 60 minutes = $\frac{1 \times 36}{36 \times 80} = \frac{1}{48}$ of the tank
 Hence, Pipe C alone can fill the tank in 48 hours.

56. (A) Total marks of 6 students = $54 \times 6 = 324$

$$\therefore \text{Correct average} = \frac{324 + 64 - 46}{6} = \frac{342}{6} = 57$$

57. (B) Let income be ₹ 1000.

$$\text{Expenditure} = 1000 \times \frac{80}{100} = ₹ 800$$

$$\text{Saving} = 1000 - 800 = ₹ 200$$

$$\text{New income} = 1000 \times \frac{124}{100} = ₹ 1240$$

$$\text{New Expenditure} = 800 \times \frac{116}{100} = ₹ 928$$

$$\text{New saving} = 1240 - 928 = ₹ 312$$

$$\therefore \text{Required increase\% in saving} = \left(\frac{312 - 200}{200} \times 100 \right) \% = 56\%$$

58. (C) Let $P = \left[\frac{x}{\left(1 + \frac{R}{100}\right)} \right] + \left[\frac{x}{\left(1 + \frac{R}{100}\right)^2} \right]$

Where, P = Principal borrowed

x = Annual instalment

R = Rate of interest

$$R = \left[\frac{5290}{\left(1 + \frac{15}{100}\right)} \right] + \left[\frac{5290}{\left(1 + \frac{15}{100}\right)^2} \right]$$

$$= \frac{5290}{23} \times 20 + \frac{5290}{529} \times 400 = 4600 + 4000 = ₹ 8600$$

$$\therefore \text{CI} = 10580 - 8600 = ₹ 1980$$

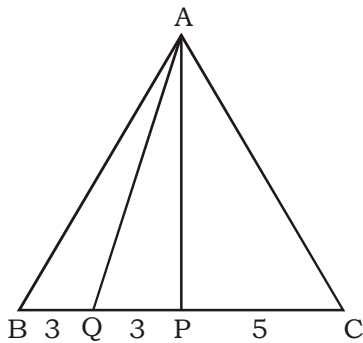
59. (C) $\sec^2 29^\circ - \cot^2 61^\circ + \sin^2 60^\circ + \operatorname{cosec}^2 30^\circ$

$$\sec^2 29^\circ - \tan^2 29^\circ + \sin^2 60^\circ + \operatorname{cosec}^2 30^\circ$$

$$1 + \left(\frac{\sqrt{3}}{2} \right)^2 + (2)^2$$

$$1 + \left(\frac{3}{4} \right) + 4 = \frac{23}{4}$$

60.(B)



$$\text{In } \triangle ABC, \text{ Area of } \triangle ABC = \frac{1}{2} \times BC \times h$$

$$\text{Similarly, Area of } \triangle ABP = \frac{1}{2} \times BP \times h$$

$$\text{Similarly, Area of } \triangle ABQ = \frac{1}{2} \times BQ \times h$$

Given, $BP : PC = 6 : 5$ and Q is the mid-point of BP .

Let assume the base = 11 cm and $BP = 6$ cm and $PC = 5$ cm

As, Q is the mid-point of BP .

So, $BQ = 3$ cm

The height of all the triangles will be same, i.e. h

$$\text{Now, } \frac{\text{ar.}(\triangle ABQ)}{\text{ar.}(\triangle ABC)} = \frac{\frac{1}{2} \times BQ \times h}{\frac{1}{2} \times BC \times h} = \frac{BQ}{BC} = \frac{3}{11}$$

$$\therefore \text{ar.}(\triangle ABQ) : \text{ar.}(\triangle ABC) = 3 : 11$$

61. (A) Given, $a + b + c = 9$ and $ab + bc + ca = 2$

$$(a + b + c)^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$$

$$(a + b + c)[(a + b + c)^2 - 3(ab + bc + ca)]$$

$$= 9 \times [(9)^2 - 3 \times 2] = 9 \times 75 = 675$$

62. (C) $32 \div 18 \text{ of } 4 \times [6 - (16 - 14) \div 4] \text{ of } \frac{3}{8} + 4 - 8 \div 2 \text{ of } 4$

$$= 32 \div 72 \times \left[6 - \frac{1}{2}\right] \text{ of } \frac{3}{8} + 4 - 8 \div 8$$

$$= 32 \div 72 \times \frac{11}{2} \times \frac{3}{8} + 4 - 1 = \frac{32}{72} \times \frac{11}{2} \times \frac{3}{8} + 3$$

$$= \frac{11}{12} + 3 = \frac{47}{12} = 3 \frac{11}{12}$$

63. (A) $\frac{\text{Radius of Cone A } (r_A)}{\text{Radius of Cone B } (r_B)} = \frac{4}{5}$

$$\frac{\text{Volume of Cone A}}{\text{Volume of Cone B}} = \frac{1}{4}$$

$$\frac{\pi r_A^2 h_A}{\pi r_B^2 h_B} = \frac{1}{4}$$

$$\left(\frac{r_A}{r_B}\right)^2 \frac{h_A}{h_B} = \frac{1}{4}$$

$$\left(\frac{4}{5}\right)^2 \frac{h_A}{h_B} = \frac{1}{4}$$

$$\frac{h_A}{h_B} = \frac{1}{4} \times \frac{25}{16} = \frac{25}{64}$$

$$\therefore h_A : h_B = 25 : 64$$

64. (A) Equal amounts are spent on both types of gauras.

So, in ₹1 first type apple bought = 3

In ₹ 1 second type of apple bought = 2

If he sells 5 apple in ₹ 2 so overall he neither gains nor losses.

65. (D) Relative speed = $(50 - 30) \text{ km/hr} = 20 \text{ km/hr} = 20 \times \frac{5}{18} = \frac{50}{9} \text{ m/s}$

$$\therefore \text{Length of train running at } 50 \text{ km/hr} = \frac{50}{9} \times 18 = 100 \text{ m}$$

66. (B) $A = P \left(1 + \frac{r}{100}\right)^T$

$$1102.5 = 1000 \left(1 + \frac{5}{100}\right)^T$$

$$\left(\frac{21}{20}\right)^T = \frac{1102.50}{1000} = \frac{441}{400} = \left(\frac{21}{20}\right)^2$$

$$\therefore T = 2 \text{ years}$$

67. (A) Let selling price of a chair = ₹ x

$$\text{So total selling price} = 30x + 20x \times \frac{3}{4} = ₹ 45x$$

$$\text{Selling price} = 5000 + \frac{35}{100} \times 5000 = ₹ 6750$$

$$\therefore \text{Selling price of a chair} = \frac{6750}{45} = ₹ 150$$

68. (B) $\frac{x-1}{y-1} = \frac{1}{3}$

$$3x - 3 = y - 1$$

$$y = 3x - 2 \quad \dots\dots(i)$$

$$\frac{x+1}{y+1} = \frac{1}{2}$$

$$2x + 2 = y + 1$$

Substituting value of y ,

$$2x + 2 = 3x - 2 + 1$$

$$x = 2 + 2 - 1 = 3$$

$$y = 3 \times 3 - 2 = 7$$

$$\therefore \text{Required fraction} = \frac{3}{7}$$

69. (D) Diameter of iron sphere = 7 cm

$$\text{Radius of iron sphere} = \frac{7}{2} \text{ cm}$$

$$\text{Volume of iron sphere} = \frac{4}{3} \pi r^3 = \frac{4}{3} \pi \times \left(\frac{7}{2}\right)^3 \text{ cm}^3$$

Radius of conical vessel = 7 cm

$$\text{Volume of conical vessel} = \frac{1}{3} \pi r^2 h = \frac{1}{3} \pi \times (7)^2 \times h$$

ATQ,

$$\frac{1}{3} \pi (7)^2 \times h = 2 \times \frac{4}{3} \pi \times \frac{7 \times 7 \times 7}{2 \times 2 \times 2}$$

$$h = \frac{(7)^3}{(7)^2}$$

$$\therefore h = 7 \text{ cm}$$

70. (D) **Divisibility of 12:** If any number is divisible by both 3 and 4, then the number is divisible by 12.

Divisibility of 3: If sum of digits of number is divisible by 3, then the number is divisible by 3.

Divisibility of 4: If the last two digits of number are divisible by 4, then the number is divisible by 4.

$2y72x4$ is divisible by both 3 and 4, then value of x may be 0, 2, 4, 6 and 8.

When value of x is 0, then the value of $y = 0$

So, value of $xy = 0 \times 0 = 0$

71. (D) $a^4 + a^2b^2 + b^4 = 64$

$$(a^2) + (b^2)^2 + 2a^2b^2 - a^2b^2 = 64$$

$$(a^2 + b^2)^2 - (ab)^2 = 64$$

$$(a^2 - ab + b^2)(a^2 + ab + b^2) = 64 \quad [\because x^2 - y^2 = (x + y)(x - y)]$$

$$4 \times (a^2 + ab + b^2) = 64$$

$$a^2 + ab + b^2 = \frac{64}{4} = 16 \quad \dots\dots(i)$$

$$a^2 - ab + b^2 = 4 \quad \dots\dots(ii)$$

Subtract equation (ii) from (i),

$$a^2 + ab + b^2 = 16$$

$$\underline{-a^2 - ab + b^2 = 4}$$

$$2ab = 20$$

$$ab = 10$$

$$\therefore ab = 10$$

72. (B) Total amount of expenditure = 100%

Expenditure on transport = 12.5%

$$\therefore \text{Required answer} = \frac{100}{12.5} = 8 \text{ times}$$

73. (C) Total expenditure incurred on salary and interest = $(20 + 17.5)\% = 37.5\%$

Total expenditure on infrastructure and transport = $(20 + 12.5)\% = 32.5\%$

Required ratio = $(37.5 : 32.5) = 15 : 13$

74. (B) Percentage of expenditure on salary = 20%

20% = 2.8 crores

$$100\% = \left(\frac{2.8}{20} \times 100\right) \text{ crores} = 14 \text{ crores}$$

Difference between expenditure incurred on advertisement and tax = $(15 - 10)\% = 5\%$

100% = 14 crores

$$\therefore 5\% = \left(\frac{140000000}{100} \times 5\right) = ₹ 70 \text{ lakhs}$$

75. (B) Required % = $\left(\frac{20 - 5}{20} \times 100\right)\% = \left(\frac{15}{20} \times 100\right)\% = 75\%$

MEANINGS IN ALPHABETICAL ORDER

Admiration	respect and warm approval	प्रशंसा
Blithe	showing a casual and cheerful indifference considered to be callous or improper	जिंदादिल
Curious	eager to know or learn something	जिज्ञासु
Hilarous	extremely amusing	आनंददायक
Insignificant	too small or unimportant to be worth consideration	तुच्छ
Misery	a state or feeling of great distress or discomfort of mind or body	कष्ट
Pathetic	arousing pity, especially through vulnerability or sadness	दयनीय
Penitence	the action of feeling or showing sorrow and regret for having done wrong; repentance	तोबा
Vicious	deliberately cruel or violent	बुरा
Virtuous	having or showing high moral standards	धार्मिक

SSC MOCK TEST - 328 (ANSWER KEY)

- | | | | |
|---------|---------|---------|----------|
| 1. (A) | 26. (B) | 51. (A) | 76. (A) |
| 2. (C) | 27. (C) | 52. (B) | 77. (B) |
| 3. (D) | 28. (B) | 53. (C) | 78. (A) |
| 4. (C) | 29. (B) | 54. (D) | 79. (C) |
| 5. (B) | 30. (D) | 55. (C) | 80. (B) |
| 6. (A) | 31. (C) | 56. (A) | 81. (D) |
| 7. (B) | 32. (C) | 57. (B) | 82. (C) |
| 8. (C) | 33. (C) | 58. (C) | 83. (D) |
| 9. (D) | 34. (C) | 59. (C) | 84. (C) |
| 10. (C) | 35. (B) | 60. (B) | 85. (D) |
| 11. (A) | 36. (A) | 61. (A) | 86. (B) |
| 12. (D) | 37. (C) | 62. (C) | 87. (A) |
| 13. (B) | 38. (A) | 63. (A) | 88. (B) |
| 14. (C) | 39. (A) | 64. (A) | 89. (B) |
| 15. (A) | 40. (D) | 65. (D) | 90. (B) |
| 16. (A) | 41. (A) | 66. (B) | 91. (A) |
| 17. (B) | 42. (D) | 67. (A) | 92. (C) |
| 18. (D) | 43. (B) | 68. (B) | 93. (C) |
| 19. (A) | 44. (A) | 69. (D) | 94. (C) |
| 20. (A) | 45. (C) | 70. (D) | 95. (B) |
| 21. (D) | 46. (A) | 71. (D) | 96. (C) |
| 22. (D) | 47. (C) | 72. (B) | 97. (A) |
| 23. (B) | 48. (D) | 73. (C) | 98. (A) |
| 24. (C) | 49. (C) | 74. (B) | 99. (D) |
| 25. (D) | 50. (C) | 75. (B) | 100. (A) |